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PIIPPONEN et al.(10) **Pub. No.: US 2014/0341126 A1**(43) **Pub. Date: Nov. 20, 2014**(54) **CONTIGUOUS INTRA-BAND CARRIER
AGGREGATION (CA), PUCCH, AND
QUASI-CONTIGUOUS UPLINK RESOURCE
ALLOCATION****Related U.S. Application Data**

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Lähteensuu**, Tampere (FI)(73) Assignee: **NOKIA CORPORATION**, Espoo (FI)(21) Appl. No.: **14/273,883**(22) Filed: **May 9, 2014**(57) **ABSTRACT**

A method and apparatus for allocating quasi-contiguous uplink data resources for a user device is provided. Transmission of data comprise at least two data clusters of sub carriers expanding over gaps reserved for uplink control channel in order, for example, to mitigate transmission power reductions due to multi-cluster transmission.

